

BEHAVIORAL ECONOMICS AND PETTY TRADING IN NIGERIA: WHERE TO SELL AND THE THOUGHTS THAT DECIDE

Anastasia Chiebuka Ifinedo *

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Abstract

Behavioral economics proves that people often make economic decisions based on certain biases and heuristics. This paper studies the relativity bias, the status quo bias, the availability bias, and their influence in petty trading. It shows how these biases determine the location in which petty traders trade and how their decision to trade in these areas affects their sales. Previous research on petty traders, behavioral economics, and these biases is analyzed and applied in context. The findings reveal that many petty traders rely on the aforementioned biases to choose locations to trade; at times, their choices affect their sales negatively. Since sufficient information can mitigate these biases, this paper recommends a social platform be created for petty traders to share information. It also notes that an awareness of the biases and a responsive change of behavior is a big step in effectively countering these biases.

1 INTRODUCTION

For a long time, economics was called a social science because it studied people's responses to scarcity ([21c]). However, in the last century, some psychologists challenged the degree to which economics truly understood people's economic decisions ([04]). At the time, economists studied decision-making through the neoclassical approach, which assumed people were rational in handling economic problems, they aimed to maximize utility, and they always acted on complete and relevant information ([18]). Psychologists discovered that people's economic behaviors were not consistent with the neoclassical approach ([11a]). Eventually, their research into human psychology and its influence on economic decisions gave rise to a new field of study known today as behavioral economics.

Behavioral economics studies the psychology behind often-irrational economic decisions people make. Although it is still a growing field of study, experiments conducted with real humans have uncovered many biases and heuristics

*Advised by: Dr. Edoardo Gallo and Dr. Daniele Cassese from University of Cambridge

influencing people’s decision-making ([11a]). Using these biases and heuristics, psychologists have improved, debunked and formulated new economic non-neoclassical theories. One such theory is the scarcity mindset: a large gap between how much one has and how much one needs, and an obsession to bridge the gap ([12a]). This mindset feeds certain biases, specifically in people living in poverty. Since majority of petty traders in Nigeria live in poverty ([20]), they are also affected by the scarcity mindset and the biases it triggers.

One bias is the relativity bias, where people gauge options in relative terms ([08]). Basically, one cannot see the advantages or disadvantages of the option presented before one until it is compared with another. People’s tendency to weigh options by one’s advantage over the other or against a fixed reference (which is often irrelevant) influences their decision-making. While this bias may be inherent, and even good, in humans, its issue appears when people only gauge options easily comparable and avoid comparing options not easily comparable.

Another bias is the status quo bias. People affected by this bias prefer not to take any decisions at all, for fear they might regret them. To these people, the disadvantages of leaving their current position, the status quo, loom larger than the advantages of the proposed option ([08]). Loss aversion, which entails people focusing more on their losses than equivalent gains, often triggers the status quo bias.

The availability bias causes people to overestimate the probability of events occurring due to how easily they recall instances of the same event ([T74]). This bias distorts our perception of reality, having us make decisions based more on emotions than logic. Behavioral economics proves that people are less rational than we think, even in making seemingly easy choices like where we choose to sell goods.

This paper will examine the relationship between petty trading and the scarcity mindset, reflecting on how that can trigger the aforementioned biases. It will also explore how these biases decide the location a petty trader sells and the effects of those decisions on their sales. Then it will provide solutions to mitigating these biases where they have negative effects.

2 PETTY TRADING AND THE SCARCITY MINDSET

Covey ([89]) coined the term, “scarcity mindset.” Essentially, the scarcity mindset shows that people experiencing a scarcity of resources make irrational decisions to acquire those resources ([A21]). These people only see the need—and means—to satisfy immediate wants, and so they rarely plan for the future, hence keeping themselves in a state of lack. The scarcity mindset often increases loss aversion and focus on needs seen as urgent, while inducing the neglect of future needs ([12a]). Although this mindset is not necessarily dependent on the amount of money—or other resources—one has, research ([T08]) has confirmed

that this mindset commonly manifests in poor people.

In Nigeria, the number of poor people is predicted to rise from 89.0 million in 2018/19 to 95.1 million in 2022 ([ddm22]). Due to the current economic hardship and the 33 percent unemployment rate in the formal economic sector, many poor people, especially females, operate multiple informal enterprises to survive ([lfs21]; [45]). These small-scale enterprises include petty trading, farming, and artisanship.

Petty trading is an informal economic activity that involves the sale and purchase of goods (food, clothes, snacks, etc.) in small quantities ([11b]). Among other informal economic activities, petty trading is the quickest and relatively easiest enterprise to start. It does not require the average person to spend years in an apprenticeship program or much money to purchase land for farming ([99]). It also yields income daily, which enables poor people to cater for pressing needs (food, water, medicine, etc.). Many poor people in Nigeria earn a living with this trade, even though the income it generates is not enough to get them out of poverty ([B19]). But then again, their aim is usually to survive. According to neoclassical economics, this survival instinct translates into the desire and ability to make decisions that maximize sales, be it selling at the “perfect” price or choosing a location that maximizes sales and therefore profit. However, behavioral economics shows that certain biases can influence a person’s survival instinct, having them exaggerate risk and underanalyze information. This, in turn, does not lead to the best choices.

Today, the scarcity mindset forms the basis of an average Nigerian’s perception of petty trading. If the gap between a poor person’s needs and the resources that can satisfy them is large, scarcity mindset reveals that an attentional shift occurs in the person’s mind such that they become solely focused on ways to bridge this gap ([12a]). Their obsession will most likely lead to their overborrowing resources ([12a]) to meet those needs, no matter the cost of overborrowing. In the context of petty trading, however, the average—and honest—Nigerian’s way of meeting those needs is operating the enterprise that yields daily income to cater for them. Because of this, today’s Nigerian views petty trading as an enterprise to survive, not necessarily thrive.

One decision petty traders make when setting up their enterprise is the location to sell their goods. The location of a shop can affect the chances of a petty trader making sales. Considering how much petty traders depend on daily sales, this decision plays a big role at the beginning stages of an enterprise. It is the reason more petty traders are found in semi-urban and urban areas than in rural areas ([T17]), even though most petty traders make up rural Nigeria ([20]). Due to constant rural migration, petty traders understand that selling their goods in cities will bring more income. However, choosing to sell in specific parts of a region is as important as selling in the region itself. Certain biases can—and do—dictate how traders choose these locations in our cities.

3 THE RELATIVITY BIAS

The relativity bias, also known as the relativity trap, causes people to compare similar options before making decisions ([21a]). It is a subset of the anchoring effect, which measures options against a fixed reference (anchor). This comparison often leads to irrational decision-making because the anchor with which economic agents compare their options is often irrelevant or has an overestimated relevance ([21b]).

Ariely ([08]) describes an empirical study to explain the relativity bias. The professor asked 100 students at MIT's Sloan School of Management to pick a subscription plan for a magazine. Their options were an Internet-only subscription for \$59, a print-only subscription for \$125, and a print-and-Internet subscription for \$125. When he presented these options to the students, 84% of them picked the third option and 16% picked the first. None picked the second option. However, when he removed the second option, only 32% went for the third option. Ariely ([08]) reveals that the only reason these students went for the third option in the first instance was because of its superiority over its comparable counterpart, option number two. When he removed the comparable option, not many went for the third option. The study highlights the basic principle of the relativity bias: people make choices by comparing the advantages of one option with those of its alternatives ([08]).

It is no surprise then that the relativity bias can influence a petty trader's choice of location. Neoclassical economics dictates that, to make sales, traders will choose a location that attracts it. This expectation is not wrong. After all, it is why one of the first questions a trader asks about an area is if it "moves the market," that is, attracts customers. Nonetheless, behavioral economics acknowledges that traders may not have complete information to decide on a location. That is why they subconsciously employ the relativity bias, gauging one advantage of a location over the other.

The print subscription plan and Internet-and-print subscription plan from the study represent shops costing the same rent, but in different locations. Since rent is the same, the petty trader, say, Trader X, turns to the next important factor: both areas' ability to attract sales. Where Trader X can assess colleagues in these different areas, he will analyze the question of sales by gauging the amount of goods each colleague returns home with every day. If they are to choose between the areas their colleagues sell in, they will most likely set up shop in the area having the colleague that sells off his goods quickly. This is why more traders sell in peri-urban and urban areas, even though many live in rural communities ([20]). Traders in the rural areas know their colleagues in the city make more sales, mostly due to the ever-growing population from rural-urban migration. Therefore, from a place of healthy comparison, these traders apply the relativity bias and come to the cities to continue their trade.

The relativity bias is not necessarily a bad heuristic. It can yield good results, such as petty traders making huge sales. However, the relativity bias only compares elements that can be easily compared and avoids elements that cannot ([08]). It blindsides traders to other information which may be relevant

to the question of sales. For one, colleagues whom Trader X compares may have been making different sales for different reasons, not including their location. However, the relativity bias oversimplifies comparisons. Trader X may choose a location presumed to attract sales, only to discover it did not; his colleague only made sales because their goods sold in that area, and his did not. It could also be that Trader X's colleague had a larger customer network, or a better attitude to attract customers. By basing the total of sales on location alone, Trader X will not make as many sales as he thought he would ([99]).

3.1 SOLUTION

People gauge comparable options against an anchor or reference point. Since it is human nature to compare information, it is impossible to remove these reference points, and therefore impossible to eliminate the relativity bias ([21b]). Ariely ([08]) shows, however, that one can mitigate its effects by changing one's reference points.

Kahneman and Tversky ([T74]) reveal that in anchoring, the reference point is usually the information initially made available to the economic agent. In choosing a location to influence sales, this would be the first piece of information Trader X receives about an area, especially if it is from or about a close colleague. This anchor subconsciously shapes their expectations for a location, for better or worse. However, asking other traders in that same area about the area and comparing their responses may reveal more information about the location's ability to attract sales. Alternating between different anchors will reduce the effect of the relativity bias in decision-making.

A practical and cost-effective way to gather and filter information is by developing social platforms for petty traders to exchange information. These platforms can be regulated by either private individuals or the government. Also, they can be applications or websites where traders can easily retrieve and weigh different views on an area before making a decision.

A better way to mitigate the relativity bias is by weighing the factors that make up the anchor ([21b]). At the end of the day, the trader's goal is to make sales, and many factors other than one's location can influence sales. On that note, the petty trader asking for information should also take into account the other factors that may be increasing or decreasing his informant's sales. These factors may include the type of products they sell, the type of customers in the area, how long his informant has stayed in that location, and even the attitude of the informant. By weighing these factors in addition to the information on location, the effect of oversimplifying comparisons will be reduced. Trader X may discover that their informant's sales have more to do with these other factors than their location.

Combining both solutions will be more effective in mitigating the relativity bias, even though they can be mentally demanding. In any case, awareness is the first key to alleviating this bias. Petty traders must become conscious of the subconscious thoughts that influence their decisions.

4 THE STATUS QUO BIAS

Due to the lasting effect of colonialism, Africans, more than any people, are keen on preserving their culture and identity ([98]). Naturally, they fear that if they do not do so, their way of life will fade away. This is why one will find immigrant communities in foreign countries and African parents speaking to their children more in their local language than in English ([89]). To many Africans, the fear of losing their identity looms larger than the gain of socializing and polyglotism. While that fear may be good for the preservation of culture, in some cases, it may lead to close-mindedness and in turn, one making irrational decisions.

Behavioral economics has discovered a similar kind of fear in the financial world: loss aversion. This heuristic causes people to focus more on avoiding real or potential loss than acquiring equivalent gains ([06]). Loss aversion triggers the status quo bias, named by Samuelson and Zeckhauser ([Z59]). The status quo bias entails remaining in one's current position—known as the status quo—because the disadvantages of leaving it loom larger than the advantages ([06]). Emotions trigger the status quo bias ([Z59]). The sentimental value attached to one's possession or position magnifies the disadvantages of giving it up.

In choosing a location to trade, the status quo bias will most likely manifest under two conditions. One, there is a status quo. It could be the petty trader already has a shop, but has been offered another space in a different location. Two, that petty trader must have attached some degree of sentiment to their current position. They may have gotten regular customers, inherited their shop from their parents, or spent a good sum on maintaining the shop. Kahneman ([11a]) calls the latter their sunk cost. The petty trader's attachment to their status quo increases regret aversion ([T73]). They fear they might regret leaving the status quo. It may not matter if the new location has more advantages; the petty trader is more affected by the disadvantages of leaving their current position ([ttt21]).

By all indications, the status quo bias does more harm than good in the financial world ([06]). It is heavily based on emotions, a sworn enemy to the stoicism neoclassical economics requires. However, it may not harm a petty trader's sales, depending on the condition of their current and proposed locations. If a petty trader's current location is clearly unfavorable to their trade, yet they refuse to leave because of sentiment, one can say the status quo bias has affected them negatively. If, however, a petty trader chooses to remain in their current location because it favors their sales, the status quo bias is not harmful to them.

4.1 SOLUTION

If the status quo bias influences one's decisions negatively, it should be removed. Fortunately, one can completely overcome—although with some difficulty—this bias. Overcoming the status quo bias means the trader in question will have to leave their status quo. In an experimental study, List ([71]) reveals that

a trader’s increasing market experience can eliminate loss aversion, which triggers the status quo bias. However, besides experience, there are other ways to remove, and even prevent, the status quo bias in decision-making. One way to prevent this bias from trapping a trader in the first place is by framing his status quo in terms of its losses. Framing, another heuristic, triggers risk-averse or risk-seeking behaviors, depending on the way one’s options are presented ([T58]). In a study, Kahneman and Tversky ([T58]) discovered that, often, choices involving losses are risk-taking and choices involving gains are risk-averse. In petty trading, this means that if a trader’s current location is presented to them in terms of its disadvantages, chances are high that they would be willing to risk moving to another location. The status quo must be the only reference point framed in terms of its losses. Presenting the proposed location in terms of its advantages will not eliminate the status quo bias because it is not the trader’s problem.

What happens if this tactic does not work? What if the trader’s attachment to their shop is so strong that presenting their losses does not change their mind? To overcome this bias in such situations, a more powerful emotional response is needed. One may get this response by applying the relativity bias. For this solution to work effectively, the trader in question has to know other colleagues selling and thriving in the proposed location. If one leverages on people’s tendency to draw comparisons, especially within intimate circles, the petty trader is more likely to move to the proposed location. In this scenario, the trader in question no longer sees the benefits of the proposed location as a singular entity. Due to the competitive spirit the relativity bias breeds, the trader now views the new location in light of their close colleagues reaping its benefits.

How can one remedy a situation where petty traders remain at the status quo because of sunk cost? This is an issue of mental accounting. Kahneman ([11a]) points out two mental accounts humans subconsciously generate: the “general revenue” account and the psychological account. Neoclassical economists only see the more rational “general revenue” account, where money lost and/or spent is simply that: money that is gone. However, when petty traders look at items in their current shop—and the shop itself—they have spent on, they charge their expenses on the psychological account. By implication, this magnifies the cost of leaving it behind. In this case, one can mitigate the status quo bias by suggesting traders take the materials they spent on to their new location. If they are not able to do so, one can recommend they sell the items. Of course, it will not take away the fact that they spent money on the shop itself. However, selling some materials to recover their expenses or taking those items along will soothe the trader in question.

5 THE AVAILABILITY BIAS

The availability bias, also known as the recency bias, is the tendency for people to overestimate the chances of an event happening based on the ease with

which they recall similar instances occurring or how recently the same event took place ([T32]; [22]). Paul Slovic, Sarah Lichtenstein, and Baruch Fischhoff ([85]) conducted an experiment to demonstrate the availability bias and the factors that trigger it. In their survey, the participants considered paired causes of death and named the one in each pair that caused frequent deaths. Their options were: stroke versus accident, lightning versus botulism, tornadoes versus asthma, among others. The participants' answers were compared with the health statistics of that time. For the first option, stroke caused twice as many deaths as accidents. However, 80% of the participants said accidents were most likely to cause deaths. They also said lightning was less likely to cause deaths than botulism, even though it was 52 times more likely. Furthermore, asthma was 20 times more likely to cause deaths than tornadoes, but the participants thought otherwise.

From this survey, the economists discovered that people's emotional reactions to events influenced how easily they can recall them. It was easier to picture tornadoes and accidents, and the ease with which these events came to mind induced the availability bias. Therefore, emotions as well as memory can trigger the availability bias. Slovic ([85]) eventually termed this emotional trigger the affect heuristic. Kahneman ([11a]) notes that the media coverage around an event also contributes to the ease with which one recalls it. Together, these triggers shape our perception of probability, which is many times different from reality.

In petty trading, the availability bias manifests in the issue of insecurity. Insecurity itself has been one of Nigeria's headaches for decades; secessionist agitations, ritual killings, armed robbery, cybercrime and others have, at this point, become the norm in the country ([22]). It is no surprise then that the level of insecurity in an area can—and does—influence the petty traders' choice of location. However, this bias has little effect on petty traders since the general notion remains: nowhere is safe, but some places are safer than others. In deciding on a location to trade, the availability bias mostly affects amateur petty traders long controlled by one result of the scarcity mindset: high loss aversion ([21]). To these traders, gaining sales equals not losing sales. Naturally, this would mean avoiding areas where their income for the day can be wrestled from them. How these traders get to "know" such areas, however, is heavily manipulated by the media on different levels. For one, more incidences of armed robbery, killings, and terrorism affecting petty businesses in Northern Nigeria are researched and reported on than incidences in the South ([12b]). This means petty traders who have the means to travel end up settling in the South, which faces other forms of insecurity hardly on the newspapers' front page.

In Southern Nigeria, incidents of theft and robbery affecting petty traders are only brandished by the media if they happened in densely populated places like markets and big cities ([17]). In news reports, one would find these places specifically named, thereby making it easier for the masses to remember and be influenced by them. On the rare occasion the press reported robberies in sparsely populated areas, those places were simply called "quiet areas," so they are less

remembered ([16]). These reports tend to skew a novice trader’s perception of reality. They may leave locations “always under attack” to “safer places”, only to discover their current location is just as unsafe as the others the media talks about. The trader in question is just as prone to not going home with sales as he was in the areas he avoided.

The affect heuristic influences the imagery of insecurity as well. When one talks about insecurity, images of men holding guns as in armed robbery, bombs tossed around, and even robbers lynched as per jungle justice come to mind easily. People hardly recall the scams and petty thievery pulled on petty traders almost every day ([trr19]). The news does not cover “non-exciting” and less inciting incidents like this.

In the case of insecurity, the availability bias disappears as traders become either more experienced at defending themselves in their location, more blasé about the issue itself, or more inclined to take risks and fend for themselves.

5.1 SOLUTION

The availability bias stems from a person’s lack of complete and relevant information. Therefore, one way to mitigate the effects of this bias is to provide information for petty traders or encourage them to find relevant information themselves. The best way to increase the availability of information is through networking. Creating forums for traders to exchange information is crucial to countering the availability bias. Information is power. As the government has affected schemes like Trader Moni to relieve petty traders financially ([18]), other schemes focused on sharing information can be enacted or integrated into previous schemes. The new schemes can introduce the use of social platforms specifically designed for traders to share information on insecurity, among other issues they may be facing in their areas. This way, petty traders get to share their stories where they are seen and not easily forgotten. This way, the petty traders’ reality is not skewed by news reports.

Increased availability of information alone, however, may not counter the availability bias effectively. Too much information can increase cognitive strain if one chooses to reflect on them. The cognitive strain increases reliance on heuristics in decision making, the very factor we wish to eliminate ([F81]). It also increases risk aversion ([J15]). For traders, risk aversion will most likely translate to a preference for the status quo. Therefore, the relevance of the information shared on the proposed platform should also come into play.

One way to increase relevance is by specifying information. Addressing a particular group should get the attention of the people the information benefits. It also reduces the cognitive strain on those who may find the information irrelevant at the time. For example, the administrators of this proposed social platform can share an update on a particular location, beginning with, “FOR THOSE INTERESTED IN AREA X...” This will instantly sift the members of the platform, drawing only the attention of its target audience. Announcements like this can also be regulated and archived for future reference.

Our newspapers can help traders adjust their perception of reality. Essentially, newspapers cover the most exciting stories on the front pages. Unless one is a diligent reader, one loses interest by the time one gets to the middle of the paper. Meanwhile, it is incidents like robberies in quiet areas that are covered towards the end of newspapers, especially local ones. That is the news closest to the people, but they do not get to read it. Therefore, an idea on the structuring of newspapers is suggested. Like a good number of books, a reference or table of contents should be embedded in our papers to serve as a guideline for whoever reads them. People regard the importance of different stories in a paper differently. With a table of content, traders can easily spot the reports on insecurity affecting them.

Furthermore, a change in our behavior can mitigate the availability bias. This begins with recognizing we can be—and often are—affected by it. The affect heuristic, especially in cases of insecurity, stirs panic in the population so that people exaggerate the frequency of particularly terrible events. While mongering fear, people make statements like, “They always steal in Area A,” whereas robbers stormed that area only once or twice. When exaggerated stories like these spread, they become truth and distort people’s perception. Therefore, a knack for questioning, and not simply accepting, stories like these is encouraged among traders. If these stories are reflected upon, people might discover traces of the availability bias.

6 CONCLUSION

Behavioral economics uncovers biases and heuristics which influence many economic decisions, including the location of a petty trader’s shop. The relativity bias shows why traders are drawn to locations where their colleagues sell well. The problem with this bias only arises when traders overestimate their chances of doing as well as their colleagues, then their sales suffer because they compared only their sales with their colleagues’ and avoided other points of comparison. The status quo bias prevents traders from changing locations, whether or not they fare well in their current position, because of sentiment. The availability bias manifests in the issue of insecurity; because of the press—and hearsay—people exaggerate the risk of danger in one area and do not trade there, only to face the same danger in areas not mentioned in the media.

This paper majorly suggests using online social platforms to counter these biases. Petty traders who are not tech-savvy will have to be trained, and that may take time. However, forming social networks on the web is more practical and cost-effective than offline platforms. Also, larger social networks produce more information and awareness, which goes a long way to alleviate the biases petty traders rely on.

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